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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,919	01/03/2002	Hiro Yoshi Murata	217928US2	2292

22850 7590 12/18/2003

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

ALPHONSE, FRITZ

ART UNIT	PAPER NUMBER
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2675

DATE MAILED: 12/18/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

TS

# Office Action Summary

Application No.

10/033,919

Applicant(s)

MURATA ET AL.

Examiner

Fritz Alphonse

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,9 and 16 is/are rejected.
- 7) ☐ Claim(s) 3-8,10-15 and 17-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 9, 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Sato (U.S. Pat. No. 5,712,656).

As to claim 1, Sato (fig. 1) shows a display device comprising a display panel including a plurality of pixels (3), each of the pixels including: a pixel portion for executing display in accordance with a write voltage (col. 6, lines 23-33); and a data memory portion (100) for converting a write voltage equivalent to any one of white and black represented by a tone level of a normal display area into a write voltage (note that Sato teaches a plurality of switching elements for applying write voltages col. 7, lines 13-16) corresponding to any one of brightest white display and darkest black display in the pixel portion (note the colored black and white liquid crystal display (col. 11, lines 21-23), and for holding the converted write voltage (see col. 6, lines 39-44), wherein normal display is carried out with the write voltage (col. 6, lines 28-33) represented by the tone level of the normal display area, and static image display is carried out with the write voltage, which is held in the data memory portion and corresponds to any one of the brightest white display and the darkest black display in the pixel portion (figs. 11, 14).

As to claim 2, Sato (fig. 1) shows a display device comprising a driver (note the data driver 14 and scan driver 15 for supplying write voltage representing grayscale)

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representing the write voltage represented by the tone level of the normal display area to the pixel portion and the data memory portion.

As to claim 9, the claim has substantially the limitations of claim 1; therefore, it is analyzed as previously discussed in claim 1 above.

As to claim 16, Sato discloses a display device according, wherein the display layer is a liquid crystal layer (col. 7, lines 25-27).

### *Conclusion*

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Okumura et al. (U.S. Pat. No. 5, 945,972) discloses a display device for providing signal to the pixels on a column-by-column basis.

Quanrud (U.S. Pat. No. 6,140,983) discloses a display system having multiple memory elements per pixel with improved layout design.

Smith et al. (U.S. Pat. No. 6,278,428) discloses a display panel.

Quanrud (U.S. Pat. No. 6,339,417) discloses a display system having multiple memory elements per pixel.

Kane et al. (U.S. Pat. No. 6,618,030) discloses an active matrix light emitting diode pixel structure and concomitant method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz Alphonse whose telephone number is (703)-308-8534. The examiner can normally be reached on M-F, 8:30-6:00, Alt. Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven J Saras can be reached on (703)-305-3900.

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**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**Or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-306-0377.



Fritz Alphonse

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December 8, 2003



STEVEN SARAS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600